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# JOURNAL

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# Economic Note

## Livestock producers' ratings of alternative veterinary information sources

In conjunction with the 1987 American Veterinary Medical Association study on the US market for food animal veterinary medical services, a national survey of livestock producers was conducted.[1,2] In addition to securing data on producers' animal health expenditures, information also was collected on producers' opinions about their veterinarians' (and their own) knowledge of several subject areas. Analysis of the survey was based on 2,044 usable questionnaires, which included 894 primarily beef producers, 417 dairy producers, 338 swine producers, and 395 sheep producers.

Prepared by J. Karl Wise, PhD, Wisemark Associates, PO Box 681189, Schaumburg, IL 60168-1189.

### Ratings of knowledge

Livestock producers were asked to rate the following individuals:

- Feed salesman
- Local veterinarian
- Farm store specialist
- Traveling distributor
- Extension veterinarian
- Agricultural extension agent
- Artificial insemination technician
- You or your manager

for their knowledge of 6 subject or problem areas:

- Animal/herd management
- Feed/nutrition
- Diagnosis of sickness or injury
- Reproduction/breeding
- Agribusiness/economics
- Treatment of sickness or injury.

Ratings for each individual as a source of knowledge were based on a scale of 1 to 5, with 1 being low knowledge and 5 being high knowledge. For purposes of comparison, the respondents also were asked to rate themselves or their livestock enterprise manager (you or your manager).

The ratings represent the livestock producer's perception of knowledge of each potential source of assistance. It is perceived knowledge that determines who the producer contacts for assistance, regardless of whether the perception is accurate.

Table 1 summarizes the producer's average knowledge rating of the local veterinarian and that of the producer himself or his enterprise manager, and indicates

*Table 1—Producers' mean knowledge rating of veterinarian, producer, and highest-rated alternative*

| | Animal/herd management | Feed nutrition | Diagnosis of sickness or injury | Reproduction/ breeding | Agribusiness/ economics | Treatment of sickness or injury |
|---|---|---|---|---|---|---|
| Beef producer | | | | | | |
| Local veterinarian | 3.9* | 3.7 | 4.5 | 4.2 | 2.9 | 4.5 |
| Producer or manager | 3.9† | 3.5 | 3.3 | 3.5 | 3.6 | 3.5 |
| Highest alternative | 3.2 D‡ | 3.8 A | 3.4 D | 3.6 F | 3.2 E | 3.3 D |
| Dairy producer | | | | | | |
| Local veterinarian | 4.0 | 3.6 | 4.7 | 4.5 | 2.8 | 4.6 |
| Producer or manager | 4.0 | 3.6 | 3.5 | 3.5 | 3.8 | 3.5 |
| Highest alternative | 3.2 D,E | 4.0 A | 3.4 D | 4.0 F | 3.6 E | 3.4 D |
| Hog producer | | | | | | |
| Local veterinarian | 3.9 | 3.6 | 4.6 | 4.0 | 2.9 | 4.6 |
| Producer or manager | 4.0 | 3.6 | 3.5 | 3.6 | 3.6 | 3.6 |
| Highest alternative | 3.3 D | 4.0 A | 3.3 D | 3.5 F | 3.2 E | 3.4 D |
| Sheep producer | | | | | | |
| Local veterinarian | 3.3 | 3.2 | 4.3 | 3.8 | 2.4 | 4.4 |
| Producer or manager | 4.1 | 3.7 | 3.6 | 3.9 | 3.5 | 3.8 |
| Highest alternative | 3.2 D | 3.4 A | 3.4 D | 3.3 D | 3.1 E | 3.4 D |

*Surveyed producers rated veterinarians' knowledge of each subject area on a scale of 1 to 5, with 1 = low knowledge to 5 = high knowledge. †Mean knowledge rating, by producers, of their own knowledge. ‡Mean knowledge rating, by producers, of highest alternative to veterinarian or themselves.

A = feed salesman; B = farm store specialist; C = traveling distributor; D = extension veterinarian; E = agricultural extension agent; F = artificial insemination technician/breeder.

the highest rated alternative to either the local veterinarian or the producer.

All livestock producers ranked veterinarians highest on their knowledge of diagnosis and treatment of sickness and injury, compared with other sources of help. For example, the dairy producers' average rating of the local veterinarian for diagnosis was 4.7, and for treatment, 4.6. The sheep producers' average ratings of the local veterinarian were 4.3 and 4.4 for diagnosis and treatment, respectively. Ratings by all producers for the local veterinarian for these 2 areas ranged from 4.3 to 4.7.

For diagnosis and treatment, dairy producers' average rating of their own knowledge or their managers' knowledge was 3.5. For all producers, the average rating of producer's knowledge of diagnosis and treatment ranged from 3.3 to 3.8.

All respondents rated the extension veterinarian as the highest-rated alternative source for knowledge of diagnosis and treatment, with ratings that ranged from 3.3 to 3.4.

Regarding diagnosis and treatment of sickness and injury, these data reflect producers' perceptions that the local veterinarian is the most knowledgeable. Producers rated themselves about 1 point lower on the 5-point scale and rated extension veterinarians, on average, 0.1 to 0.4 lower than themselves. The only exception for this was beef producers, who rated extension veterinarians slightly higher than themselves for diagnosis.

Regarding animal/herd management, beef, dairy, and hog producers rated local veterinarians and themselves nearly the same, at about 3.9 to 4.0. Sheep producers rated local veterinarians at 3.3, compared with themselves at 4.1. Extension veterinarians were the highest-rated alternative, at about 3.2 for all producers, approximately 0.7 less than the producer. These data suggest that producers perceive themselves knowing as much about livestock herd management as the local veterinarian and more than any other individual available as a source of information.

Regarding the subject of feed and nutrition, dairy and hog producers rated themselves and the local veterinarian as 3.6. Beef producers rated the local veterinarian 0.2 higher than themselves, and sheep producers rated the local veterinarian 0.5 lower than themselves. With the exception of sheep producers, livestock producers perceived the feed salesman as having greater knowledge of feed and nutrition than either the local veterinarian or themselves. Sheep producers felt that their knowledge was greater than either the local veterinarian or the feed salesman.

In the area of reproduction and breeding, all but the sheep producer rated the local veterinarian highest in knowledge, particularly dairy producers, who rated veterinarians at 4.5 in that area. Dairy producers rated themselves about 0.7 to 1.0 lower, at about 3.5. The artificial insemination technician/breeder was the highest-rated alternative, but for all producer groups was lower than the local veterinarian. Sheep producers rated the local veterinarian 0.1 lower than themselves.

All 4 producer groups perceived the local veterinarian as having less knowledge of agribusiness and economics than themselves. While their self-ratings ranged from 3.5 for sheep producers to 3.8 for dairy producers, local veterinarians were rated at about 2.8 to 2.9. All producers perceived the agricultural extension agent as having greater knowledge (3.1 to 3.6) than the local veterinarian.

From these survey data, it is concluded that beef, dairy, and hog producers perceive local veterinarians as strong in their diagnosis and treatment of sickness and injury, and also in reproduction and breeding. Regarding animal herd management and feed/nutrition, local veterinarians are perceived to possess about the same level of knowledge as the producer himself or the operation manager. Feed salesmen are perceived to have slightly greater knowledge of feed/nutrition relative to local veterinarians and the producer. The local veterinarian's knowledge of agribusiness and economics was perceived as relatively weak compared with the producer's own knowledge and that of the agricultural extension agent. Sheep producers perceived that local veterinarians possessed greater knowledge of diagnosis and treatment of sickness and injury, but veterinarians were not perceived to be particularly knowledgeable in the other 4 subject areas.

## Order of contact

One indicator of the demand by livestock producers for veterinary services is the order in which producers would contact potential sources of help for specific types of problems. Respondents to the survey of farm and ranch operators were asked to order the individuals as they would be likely to contact them if they had a question or problem. For a given subject area, individuals were ranked from 1 to 7 (1 would be their first contact, 2 would be their second contact, etc). Table 2 summarizes the median ranked order of contact assigned by producers to local veterinarians for each subject or problem area.

Local veterinarians were ranked as the first contact for diagnosis and treatment of sickness or injury, and for questions or problems in reproduction and breeding. Approximately 3 of 4 producers reported that they would be likely to contact a local veterinarian first if they had a question or problem which they felt related to diagnosis or treatment of an animal's condition. About 2 of 4 producers would contact a local veterinarian first for a question or problem related to reproduction or breeding.

*Table 2—Ranked order of contact for a local veterinarian by livestock producers*

| | Animal/herd management | | Feed nutrition | | Diagnosis of sickness or injury | | Reproduction/ breeding | | Agribusiness/ economics | | Treatment of sickness or injury | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank* | 1† (%) | Rank | 1 (%) | Rank | 1 (%) | Rank | 1 (%) | Rank | 1 (%) | Rank | 1 (%) |
| Beef producer | 2 | 33 | 2 | 15 | 1 | 74 | 1 | 48 | 4 | 6 | 1 | 72 |
| Dairy producer | 2 | 34 | 2 | 13 | 1 | 77 | 1 | 51 | 4 | 5 | 1 | 75 |
| Hog producer | 1 | 40 | 2 | 11 | 1 | 75 | 1 | 51 | 3 | 6 | 1 | 74 |
| Sheep producer | 2 | 25 | 3 | 12 | 1 | 75 | 1 | 43 | 4 | 3 | 1 | 72 |

*Rank = the median rank order of contact, ie, the rank on a scale of 1 to 7 (1 = first contact . . . 7 = seventh contact) by which 50% of producers would contact a local veterinarian. †1 = the percentage of producers that would contact a local veterinarian first for a question or problem in a subject area.

For questions or problems related to herd management and feed or nutrition, local veterinarians were ranked as the second contact by all but the hog producers, who ranked local veterinarians first for animal herd management. In contrast to the majority of producers who would contact a local veterinarian first for diagnosis and treatment problems, only 1 out of 3 producers reported they would be likely to contact a local veterinarian first for a question or problem related to animal herd management. For a question on feed or nutrition, barely more than 1 of 10 producers would contact the local veterinarian first.

For agribusiness or economics, veterinarians' median ranked order of contact was fourth for beef, dairy, and sheep producers, and third for hog producers. Approximately 1 of 20 producers reported that they would be likely to contact a local veterinarian first.

## References


1. Wise JK. US market for food animal veterinary medical services. *J Am Vet Med Assoc* 1987;190:1530–1533.

2. Wise JK. *The US market for food animal veterinary medical services.* Schaumburg, Ill: American Veterinary Medical Association, 1987.


## Effects of single-dose and three-day trimethoprim-sulfadiazine and amikacin treatment of *Escherichia coli* urinary tract infections in dogs

Efficacy of single-dose and 3-day trimethoprim-sulfadiazine (TMS) and amikacin treatment regimens for induced *Escherichia coli* urinary tract infections (UTI) in dogs was evaluated. Using each regimen, effects of giving the TMS/amikacin combination or amikacin alone were compared in males and females, and the response of treated dogs was compared with that of nontreated controls.

Before treatments, magnitudes of bacteriuria were similar in all experimental groups, and UTI persisted in all nontreated dogs. Single-dose treatment regimens did not reliably eradicate UTI in males or females, whether amikacin or TMS was administered. Magnitude of bacteriuria often diminished immediately after single-dose treatment, and such reductions of bacteriuria persisted in 2 of 8 dogs. However, no males and only 1 of 4 females became abacteriuric after a single-dose treatment regimen. The single female in which UTI was eradicated was treated with a single dose of amikacin.—*K. S. Rogers, G. E. Lees, and R. B. Simpson in Am J Vet Res 49 (March 1988).*